

DEPARTMENT OF ENERGY
FY 1998 CONGRESSIONAL BUDGET REQUEST
DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands, narrative in whole dollars)

POLICY AND MANAGEMENT
PROGRAM MISSION

The Policy and Management activity supports the planning and management functions of the Department's Environmental Management (EM) program. Policy and Management funded activities include acquisition of education and training activities for "Improving the Technical Capability in Defense Nuclear Facilities Programs" (Defense Nuclear Facilities Safety Board Recommendation 93-3); environmental policy recommendations; and planning activities. Policy and Management activities are provided through contractual services and managed by the Offices of Strategic Planning and Analysis, Intergovernmental and Public Affairs, Budget, and Management and Evaluation.

The GOALS of Policy and Management are to:

- improve the efficiency and effectiveness of the contracting processes
- improve managerial and financial control
- insure that the EM workforce has the right skills mix after we have downsized

The OBJECTIVES related to these goals are to:

- implement performance based contracting
- streamline and improve the award fee process for major site contractors
- improve customer satisfaction
- use performance measurement information in policy, programmatic, and resource allocation
- develop and implement innovative approaches to Federal workforce restructuring

PROGRAM MISSION: POLICY AND MANAGEMENT (continued)

PERFORMANCE MEASURES:

Performance measurement efforts are focused on processes such as contract reform, as well as ensuring that an adequate and competent workforce is restructured to better accomplish the mission. Improvements will focus on customer satisfaction and productivity efficiencies. Specific example performance measures are:

- Incorporate quantitative and qualitative performance measures into all EM contracts as they are renegotiated
- Increase at risk portion of fees and increase amount of fees associated with objective performance measures
- Increased overall customer satisfaction to be measured by survey every six months
- Performance measurement information is integrated into the budget process and is used to make management decisions
- Increase management satisfaction with workforce skill mix, to be measured by annual workforce evaluation

POLICY AND MANAGEMENT

PROGRAM FUNDING

(Dollars in thousands)

	FY 1996	FY 1997		FY 1997	FY 1998	FY 1999
	Current	Original	FY 1997	Current	Budget	Budget
<u>Program Act</u>	<u>Appropriation</u>	<u>Appropriation</u>	<u>Adjustments</u>	<u>Appropriation</u>	<u>Request</u>	<u>Request</u>
Policy and Mgt	\$ 0	\$23,155	\$ 0	\$23,155	\$23,104	\$21,000

Public Law Authorization:

Public Law 95-91 Department of Energy Reorganization Act (1977)

Public Law 104-106 National Defense Authorization Act for FY 1996

Public Law 104-46 Energy and Water Development Appropriations Act for FY 1996

POLICY AND MANAGEMENT
(Dollars in thousands)

PROGRAM FUNDING BY SITE

	FY 1996 Current <u>Appropriation</u>	FY 1997 Original <u>Appropriation</u>	FY 1997 <u>Adjustments</u>	FY 1997 Current <u>Appropriation</u>	FY 1998 Budget <u>Request</u>
<u>Field Offices</u>					
Albuquerque Operations Office	\$ 0	\$ 610	\$ 0	\$ 610	\$ 610
Headquarters	0	18,155	0	18,155	18,104
Idaho Operations Office	0	500	0	500	500
Ohio Operations Office	0	150	0	150	150
Richland Operations Office	<u>0</u>	<u>3,740</u>	<u>0</u>	<u>3,740</u>	<u>3,740</u>
TOTAL	\$ 0	\$23,155	\$ 0	\$23,155	\$23,104

POLICY AND MANAGEMENT

Program Performance Summary

I. Mission Supporting Goals and Objectives

The Policy and Management activity provides for planning and managing the Department's Environmental Management (EM) program. Program activities encompass the Administrative Support area including other contractual services necessary to accomplish program activities that include overall management; acquisition of education and training activities for DNFSB Recommendation 93-3; and environmental policy recommendations and planning activities. Included in this decision unit is other contractual services funding requested for the EM Offices of Strategic Planning and Analysis, and Intergovernmental and Public Affairs.

II. Funding Schedule:

<u>Activity</u>	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>\$ Change</u>	<u>% Change</u>
Intergovernmental and Public Affairs	\$ 0	\$ 8,788	\$ 8,788	\$ 0	\$ 0
Training and Education	\$ 0	\$ 1,250	\$ 1,250	\$ 0	\$ 0
Contractual Services	\$ <u>0</u>	<u>\$13,117</u>	<u>\$13,066</u>	<u>\$ -51</u>	<u>\$ 0</u>
 TOTAL	 \$ 0	 \$23,155	 \$23,104	 \$ -51	 \$ 0

III. Performance Summary-Accomplishments

INTERGOVERNMENTAL AND PUBLIC AFFAIRS

The Office of Intergovernmental and Public Affairs is responsible for ensuring that the Department opens its decision-making processes to federal and state regulators, tribal governments, local officials, environment and industry representatives, and interested citizens. The Office designs and oversees cost-effective mechanisms, such as site-specific advisory boards and the National Dialogue process, to inform and involve a broad spectrum of interests in decision making.

<u>Intergovernmental and Public Affairs</u>	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
National Public Participation Program: Establish EM policy, direct 14 site-specific advisory boards, develop cost-effective techniques to increase public awareness and involvement, and evaluate effectiveness of these programs.	\$ 0	\$ 3,788	\$3,788

FY 1997 Accomplishments (To Date and Planned)

- Produced a charter and action plan for a National Dialogue on nuclear materials and waste.
- Designed and hosted a national Environmental Management Advisory Board meeting resulting in recommendations for implementing the Ten-Year Plan and budget integration.
- Responded to nearly 100,000 inquiries to the Center for Environmental Management Information (CEMI).

FY 1998 Planned Accomplishments

- Find ways to expedite cleanup schedules and reduce costs to determine future uses and acceptable cleanup goals for each site and its facilities.
- Establish DOE policies to improve institutional controls and encourage the marketing of DOE facilities.

III. Performance Summary (continued)	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
Tribal Government Relationships and Funding: Ensure Tribal governments have the resources to participate effective in EM's decision-making process concerning environmental restoration and future use of the sites.	\$ 0	\$ 5,000	\$ 5,000
<u>FY 1997 Accomplishments (To Date and Planned)</u>			
- Maintained and developed EM's government-to-government relationship with 10 tribes; designed to foster cooperation on waste shipment and environmental restoration efforts.			
<u>FY 1998 Planned Accomplishments</u>			
- Modify Tribal agreements to better address transportation issues related to spent nuclear fuel, radioactive and transuranic waste shipped to WIPP.			
Total, Intergovernmental and Public Affairs	<u>\$ 0</u>	<u>\$ 8,788</u>	<u>\$ 8,788</u>

III. Performance Summary (continued)

TRAINING AND EDUCATION

The predominant portion of the Training and Education program provides for the development of technical and professional training courses EM-wide for 2,994 Federal contractor personnel, under the direction of the National Center of Excellence at Savannah River.

Training and Education	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
Purchase and coordination of training and education courses to resolve Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 93-3 “Improving the Technical Capability in Defense Nuclear Facilities Programs” involving upgrading Federal employee technical competence in health and safety concerns. Funds will allow initiation of central development and integration to eliminate duplication and ensure uniformity and quality. Coordination will involve Headquarters offices, field sites, the Environmental Protection Agency and state regulators to ensure correctness. Topical areas will include environmental restoration, waste management, streamlined project management, and new technologies. Ninety-five percent of funding will be directed toward the training of field personnel. During FY 1998, development of the National Training Program will continue in the field in response to DNFSB Recommendation 93-3. It will be a mature and clearly defined program with continuous feedback from site management and stakeholders used to refine program needs. Funds provide for the continuation of central development and integration in order to eliminate duplication of effort and ensure uniformity and quality.	\$ 0	\$1,250	\$1,250

III. Performance Summary (continued)

FY 1997 Accomplishments (To Date and Planned)

- Begin implementation of training and education programs to resolve DNFSB Recommendation 93-3 "Improving the Technical Capabilities in Defense Nuclear Facility Programs", involving upgrading Federal employee technical competence in focused areas related to health and safety concerns. The National Training Program will be moved to the field during FY 1997 to ensure it is correctly focused on improving the technical expertise of those employees directly involved with day-to-day health and safety responsibilities.

FY 1998 Planned Accomplishments

- Continue to implement training and education programs to resolve DNFSB Recommendation 93-3 "Improving the Technical Capabilities in Defense Nuclear Facility Programs", involving upgrading Federal employee technical competence in focused areas related to health and safety concerns. FY 1998 funding used to fully develop the Technical Qualifications Program.

III. Performance Summary (continued)

CONTRACTUAL SERVICES

Provides other contractual services for the EM Headquarters mission.

Contractual Services	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
Provide analytic support for life-cycle analysis for EM programs and projects. Provide general analytic and production support for national environmental management policy including long-term stewardship strategy and completion of geographic information system development.	\$ 0	\$ 3,000	\$4,800

FY 1997 Accomplishments (To Date and Planned)

- Produced the Congressionally mandated Linking Legacies Report on the nature, magnitude and origins of the Department's environmental legacy.
- Evaluate the nature of long-term environmental stewardship needs and issues for contaminated Departmental sites.
- Evaluate status of needs for and disposition planning for materials in inventory. Established disposition planning process for such materials.
- Analyze the disposition requirements for the Department's excess facilities.
- Initiated development of a geographic information system (GIS) to track the location of contaminated facilities at the Department's sites, particularly in support of long-term stewardship efforts.

FY 1998 Planned Accomplishments

- Improve analytical capabilities for and conduct comparative life-cycle cost analyses for EM programs and projects.
- Complete development of national geographic information system.
- Provide general analytic and production support to national environmental policy development.
- Develop and begin implementing strategy for long-term environmental stewardship of DOE sites.

III. Performance Summary (continued)	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
Provide for EM-wide information management infrastructure activities, maintenance of Local Area Network, the Wide Area Network, electronic bulletin boards, electronic mail, video teleconferencing, the World Wide Web, program management and control, and Internet. Also, provides for hardware, software, maintenance and upgrades to support management information systems.	\$ 0	\$ 8,301	\$ 8,266

FY 1997 and FY 1998 Accomplishments (To Date and Planned)

- Consolidate and upgrade network servers
- Upgrade the Network Backbone
- Reconfigure and standardize workstations
- Upgrade the Dial-in Access to the Network (Mobile computing) for the remote and field office users
- Upgrade and modernize the electronic mail and Messaging system to be consistent with the rest of Department at headquarters
- Begin implementation of network security measures to effectively guard against Internet attacks on EM servers and systems
- Begin wiring the Germantown main building to support the EM staff moving from satellite locations (Cloverleaf and Trevion) to the main building
- Relocate main hubs of the network from the satellite buildings to the Germantown main computer center
- Add sites to the Department's Business Network to support corporate systems such as the Corporate Human Resources Information System and others which require the use of a business sensitive network.
- Identify and implement key systems to convert to a standardized data model which will result in significant cost savings in the future as many independent systems will be integrated to take advantage of "corporate data elements" in the administrative area.

III. Performance Summary (continued)	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
Provide editorial, technical, administrative, logistical, and analytical assistance in the development and implementation of those processes and systems associated with the design, development, implementation, and administration of the EM programs financial/planning/tracking system. This includes business process analysis, financial analysis, research, studies, documentation, and related public participation activities.	\$ 0	\$ 751	\$ 0
Provide other contractual services; such as subscriptions, legal services, exhibit space, bus service.	<u>\$ 0</u>	<u>\$ 1,065</u>	<u>\$ 0</u>
Total, Contractual Services	\$ 0	\$13,117	\$13,066

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ENVIRONMENTAL MANAGEMENT SCIENCE PROGRAM

PROGRAM MISSION

"There is growing evidence of a brewing Research and Development (R&D) crisis in the United States--the result of the cutbacks and refocusing in private-sector R&D and reductions in Federal R&D...The system suffers from a lack of consistent attention to longer-term needs and problems, a shrinking population of scientists and engineers available to perform high-quality R&D, and a loss of incentives and opportunities for a new generation of technologists." (C&E News, June 26, 1995, page 24)

The need to build a stronger scientific basis for the Environmental Management effort has been established in a number of recent studies and reports. Among the important observations and recommendations made by the Galvin Commission ("Alternative Futures for the Department of Energy (DOE) National Laboratories", February 1995) are the following:

"Probably the most important reason behind the slow pace of assessment and cleanup [of DOE waste sites] is the low quality of science and technology that is being applied in the field...There is a lack of realization that many--and some experts believe most--existing remediation approaches are doomed to technical failure. Others would require unacceptable expenditures and much extended time to reach their stated objectives...There is a particular need for long-term, basic research in disciplines related to environmental cleanup...Adopting a science-based approach that includes supporting development of technologies and expertise...could lead to both reduced cleanup costs and smaller environmental impacts at existing sites and to the development of a scientific foundation for advances in environmental technologies."

In response to the Galvin Commission Report, as well as other recent recommendations, the Office of Environmental Management (EM) has established a Basic Science Program. The mission of this program is to:

- Develop and implement a targeted long-term basic research agenda for environmental problems so that "transformational" or breakthrough approaches will lead to significantly reduced long-term cleanup costs and risks to workers and public;
- "Bridge the gap" between broad fundamental research that has wide-ranging applicability such as that performed in DOE's Office of Energy Research, and needs-driven applied technology development that is conducted in EM's Office of Technology Development;
- Serve as a stimulus for focusing the nation's science infrastructure on critical national environmental management problems.

PROGRAM MISSION - ENVIRONMENTAL MANAGEMENT SCIENCE PROGRAM (cont'd)

The Basic Science Program is a competitive program and has been offered to the DOE national laboratories, as well as academic and industrial organizations. To ensure that the program is mission-oriented and that its achievements are recognized and used by EM, the Basic Science Program is closely integrated with EM's Technology Development Focus Areas and is also closely coordinated with the Office of Energy Research to ensure use of the broad-based fundamental research and development supported by that office.

Planning for the Basic Science Program began in 1995. The program responds to a congressional mandate stated in the conference report of the FY 1996 Energy and Water Appropriations Act, to focus on long-term, basic science research as the key to developing innovative and cost-effective cleanup methods. The decision to create the program also follows through on recommendations from stakeholder groups, including environmental experts from the National Academy of Sciences and the Secretary of Energy Advisory Board (SEAB). The program was originally developed by a team that includes representatives from EM and Energy Research, with advice from the DOE national laboratories. The following activities have taken place or are planned:

- EM, Energy Research, and Laboratory team recommends science areas for FY 1996;
- Develop program plan in collaboration with the Office of Energy Research;
- Establish and conduct peer review procedure for selecting EM science areas;
- Establish EM Science Advisory Board as a standing committee under the existing EM Advisory Board;
- Continue to involve the National Academy of Sciences for programmatic review;
- Work with stakeholders to obtain input for developing site-specific research agendas.

The following primary science areas were included in the February 1996 call for applications.

- Advanced methods to accelerate treatment and immobilization of high-level wastes;
- New methods to characterize the hazards of landfills and liquid wastes;
- Emission-free destruction of organic wastes;
- Bioremediation;
- New concepts for waste stabilization of spent nuclear fuel; and
- Ecosystem restoration and management.

PROGRAM MISSION - ENVIRONMENTAL MANAGEMENT SCIENCE PROGRAM (cont'd)

The following is an overview of the major technical challenges facing the Environmental Management program which were the focus of the December 1996 Basic Science program call for applications.

The Department is the guardian of over 300 large storage tanks containing over 100 million gallons of highly radioactive wastes, which include organic and inorganic chemical compounds, in solid, colloidal, slurry, and liquid phases. The environment within the tanks is highly radioactive and chemically harsh. A few of the tanks have leaked to the environment while others are corroding. The contents of these tanks need to be characterized, removed from the tanks, treated, and converted to safe forms for disposal.

The Department is the custodian of several thousand metric tons of spent nuclear reactor fuels, resulting primarily from weapons fabrication activities during the Cold War, but also including fuel from research and naval reactors. The long-term containment performance of the fuel under storage and disposal conditions is uncertain. Such uncertainties affect the ability to license disposal methods.

The Department is the custodian of large quantities of fissile materials which were left in the manufacturing and processing facilities after the United States halted its nuclear weapons production activities. These materials include plutonium solutions, plutonium metals and oxides, plutonium residues and compounds, highly enriched uranium, and special isotopes. Additional scientific information is required to choose processes for converting these materials to stable forms.

The Department currently has on its sites over one hundred sixty thousand cubic meters of waste containing both radioactive and hazardous materials. This mixed waste contains a wide variety of materials, as varied as protective clothing, machining products and wastes, packaging materials, and process liquids. Fundamental scientific data are needed to improve processes associated with treatment systems, such as characterization, pre-treatment, and monitoring.

The Department is committed to the safe disposal of all radioactive wastes, including high-level wastes, mixed wastes, and fissile materials. Safe disposal of these wastes requires that the wide range of potential waste streams be converted into insoluble materials for long term storage. Some radioactive materials containing forms have been successfully developed and are being produced; however, at present, research challenges still exist in developing suitable forms for each waste to be stored.

The Department is currently conducting cleanup activities at many of its sites, and is preparing plans for additional remediation work. There is much scientific uncertainty about the levels of risk to human health at the end stages of the DOE clean-up effort.

Also included in the EM Science Program Decision Unit is the Risk Policy Program. The goal of this program is to conduct and integrate risk management and analysis activities into the EM decision making process. The objective of this program is to provide the information necessary to allow credible, risk-based decision-making for the EM program.

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ENVIRONMENTAL MANAGEMENT SCIENCE PROGRAM

PROGRAM FUNDING PROFILE

	FY 1996 Current <u>Appropriation</u>	FY 1997 Original <u>Appropriation</u>	FY 1997 <u>Adjustments</u>	FY 1997 Current <u>Appropriation</u>	FY 1998 Budget <u>Request</u>	FY 1999 Budget <u>Request</u>
Basic Science Program	\$ 0 <u>a/</u>	\$ 50,000	\$ 0	\$50,000	\$ 42,000	
Risk Policy Program	<u>0</u> <u>b/</u>	<u>12,136</u>	<u>(12)</u> <u>c/</u>	<u>12,124</u>	<u>8,000</u>	
Total, EM Science Program . . .	<u>\$ 0</u>	<u>\$ 62,136</u>	<u>\$ (12)</u>	<u>\$62,124</u>	<u>\$ 50,000</u>	<u>\$45,000</u> <u>d/</u>

a/ Funding of \$50,000,000 was appropriated for the Science Program under the Technology Development Decision Unit in FY 1996.

b/ Funding of \$13,875,000 was appropriated for the Risk Policy Program under the Analysis, Education, and Risk Management Decision Unit in FY 1996.

c/ Reflects FY 1997 new Budget Authority reduction used for prior year offset to the FY 1997 EM appropriation.

d/ The FY 1999 distribution by program may change based on the Environmental Management Ten-Year Plan.

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ENVIRONMENTAL MANAGEMENT SCIENCE PROGRAM

PROGRAM FUNDING BY SITE

	FY 1996 Current <u>Appropriation</u>	FY 1997 Original <u>Appropriation</u>	FY 1997 <u>Adjustments</u>	FY 1997 Current <u>Appropriation</u>	FY 1998 Budget <u>Request</u>
ALBUQUERQUE OPERATIONS OFFICE					
Los Alamos National Laboratory (NM)	\$ 0	\$ 1,645	\$ 0	\$1,645	\$ 1,645
Sandia National Laboratory (NM)	0	1,667	0	1,667	1,667
Mid-West Research Inst (CO).	0	259	0	259	259
Albuquerque Operations Office (NM)	<u>0</u>	<u>521</u>	<u>0</u>	<u>521</u>	<u>521</u>
Subtotal, Albuquerque	0	4,092	0	4,092	4,092
CHICAGO OPERATIONS OFFICE					
Argonne National Laboratory (West) (ID)	0	3,432	0	3,432	3,432
Chicago Operations Office (IL)	<u>0</u>	<u>200</u>	<u>0</u>	<u>200</u>	<u>1,000</u>
Subtotal, Chicago	0	3,632	0	3,632	4,432
IDAHO OPERATIONS OFFICE					
Idaho National Engineering Laboratory (ID)	0	1,053	0	1,053	1,053
Idaho Operations Office (ID)	<u>0</u>	<u>24,294</u>	<u>0</u>	<u>24,294</u>	<u>16,441</u>
Subtotal, Idaho	0	25,347	0	25,347	17,494
FEDERAL ENERGY TECHNOLOGY CENTER (WVA)					
	0	125	0	125	125
NEVADA OPERATIONS OFFICE					
Nevada Operations Office (NV)	0	200	0	200	200

PROGRAM FUNDING BY SITE - SCIENCE PROGRAM (cont'd)

	FY 1996 Current <u>Appropriation</u>	FY 1997 Original <u>Appropriation</u>	FY 1997 Adjustments	FY 1997 Current <u>Appropriation</u>	FY 1998 Budget <u>Request</u>
OAK RIDGE OPERATIONS OFFICE					
Oak Ridge National (TN)	0	4,483	0	4,483	4,483
Oak Ridge Inst. for Science & Education (TN)	0	510	(10)	500	500
Oak Ridge Operations Office (TN)	<u>0</u>	<u>100</u>	<u>(2)</u>	<u>98</u>	<u>98</u>
Subtotal, Oak Ridge	0	5,093	(12)	5,081	5,081
OAKLAND OPERATIONS OFFICE					
Lawrence Livermore National Lab. (CA)	0	2,010	0	2,010	2,010
Lawrence Berkeley Laboratory (CA)	<u>0</u>	<u>2,782</u>	<u>0</u>	<u>2,782</u>	<u>2,782</u>
Subtotal, Oakland	0	4,792	0	4,792	4,792
RICHLAND OPERATIONS OFFICE					
Pacific Northwest Laboratory (WA)	<u>0</u>	<u>5,659</u>	<u>0</u>	<u>5,659</u>	<u>5,659</u>
Subtotal, Richland	0	5,659	0	5,659	5,659
SAVANNAH RIVER OPERATIONS OFFICE	0	325	0	325	325
HEADQUARTERS					
Headquarters (MD/DC)	<u>0</u>	<u>12,871</u>	<u>0</u>	<u>12,871</u>	<u>7,800</u>
TOTAL, SCIENCE PROGRAM	<u>\$ 0</u> ^{1/}	<u>\$62,136</u>	<u>\$(12)</u>	<u>\$62,124</u>	<u>\$50,000</u> ^{2/}

^{1/} Funding of \$50,000,000 was appropriated for the Science Program under the Technology Development Decision Unit in FY 1996; funding of \$13,875,000 was appropriated for the Risk Policy Program under the Analysis Education and Risk Management Decision Unit in FY 1996.

^{2/} Final site distribution of Basic Science Program funding in FY 1997 and FY 1998 will be determined once fundamental research proposals are received, reviewed, and final selections are made.

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ENVIRONMENTAL MANAGEMENT SCIENCE PROGRAM

BASIC SCIENCE PROGRAM

I. Mission Supporting Goals and Objectives

Planning for the Basic Science Program began in calendar year 1995. Utilizing a \$50,000,000 Congressional add to the FY 1996 appropriation, a competitive process was initiated and offered to the DOE national laboratories, academic and industrial organizations. Peer review panels were convened to review and select proposals and selected fundamental research projects were initiated. The FY 1997 and FY 1998 funding provide for continuation of the projects and program.

II. Funding Schedule

<u>Program Activity</u>	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>\$ Change</u>	<u>% Change</u>
Basic Science Program	<u>\$ 0</u> <u>1/</u>	<u>\$50,000</u>	<u>\$42,000</u>	<u>\$-8,000</u>	<u>-16%</u>
TOTAL, Basic Science Program	<u>\$ 0</u> <u>2/</u>	<u>\$50,000</u>	<u>\$42,000</u>	<u>\$-8,000</u>	<u>-16%</u>

III. Performance Summary - Accomplishments

	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
• Develop and manage Environmental Management Science Program in collaboration with the Office of Energy Research and Idaho Operations Office.	\$ 0	\$ 200	\$ 200
• Establish and implement peer review process for selection of the proposals to be funded.	0	850	500
• Develop/improve site-specific research agendas with stakeholders.	0	150	
• Convene external review panels such as the National Academy of Sciences and a Science subcommittee under the EM Advisory Board to evaluate the process and procedures used to select the research agenda and the proposals to be funded and to develop success indicators.	0	250	150

BASIC SCIENCE PROGRAM - (continued)

III. Performance Summary - Accomplishments (continued)

	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
• Issue, manage, and provide funding for ongoing grants with National Laboratories and Universities to address identified problem areas where fundamental research is needed.	0	48,200	40,200
• Lessons learned incorporated into program to improve the processes and procedures use.	0	300	100
• Dissemination of results of completed research projects.	<u>0</u>	<u>0</u>	<u>700</u>
TOTAL Basic Science Program	<u>\$ 0</u> ^{1/}	<u>\$50,000</u>	<u>\$42,000</u>

SIGNIFICANT FUNDING CHANGES FROM FY 1997 TO FY 1998:

Basic Science Program: Majority of funding will be used to continue funding existing research commitments. Focus will be placed on dissemination of research results. (\$8,000)

^{1/} Funding of \$50,000,000 was appropriated for the Science Program under the Technology Development Decision Unit in FY 1996.

ENVIRONMENTAL MANAGEMENT SCIENCE PROGRAM

RISK POLICY PROGRAM

I. Mission Supporting Goals and Objectives

The goal of the Risk Policy Program is to provide credible risk based decision-making for the Environmental Management Program. This will be accomplished by developing risk policy and risk assessment and management practices, with meaningful stakeholder involvement, which provide for protection of human health and the environment. It includes developing the policy, guidance, and tools for credible processes for risk management.

Environmental Management supported a risk framework in 1995 by awarding a series of risk initiative grants and cooperative agreements under a Notice of Program Interest published in the Federal Register. These cooperative agreements are with independent institutions to work together to help the Department further define and implement approaches to credible risk assessment, management, and communication practices. These include: the development of comprehensive, innovative methods to assess and communicate human health and environmental risk; research programs to develop a greater understanding of the human health and environmental effects associated with remediation activities at specific sites; and the development of information for human health and ecological risk analysis. These grants were long-term efforts with the majority of the work being conducted in FY 1996, FY 1997, and potentially beyond.

In June of 1995, Environmental Management issued a congressionally mandated risk report. This report, "Risks and the Risk Debate: Searching for Common Ground, The First Step," provided an analysis of current and proposed risk management activities initiated to reduce risk and fulfill compliance requirements.

This report provided the first link between budget, compliance requirements and risk reduction activities. The Department of Energy field program managers, with expertise about these activities, categorized the environmental management work. This allowed the Department to capture the spectrum of risks associated with environmental management activities and linked the risks in a qualitative fashion to compliance requirements and budget. The Environmental Management Advisory Board endorsed the process used to collect the information and recommended that it be improved and directly tied to the budget process. In FY 1996 this was a major initiative of the Environmental Management program in support of the FY 1998 budget request.

ENVIRONMENTAL MANAGEMENT SCIENCE PROGRAM

II. Funding Schedule - Risk Policy Program (cont'd)

<u>Program Activity</u>	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>\$ Change</u>	<u>% Change</u>
Risk Policy Program	<u>\$ 0</u>	<u>\$12,124</u>	<u>\$8,000</u>	<u>\$-4,124</u>	<u>-34%</u>
TOTAL, Risk Policy Program	<u>\$ 0</u> ^{1/}	<u>\$12,124</u>	<u>\$8,000</u>	<u>\$-4,124</u>	<u>-34%</u>

III. Performance Summary - Accomplishments

	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
<ul style="list-style-type: none"> Support Selected Risk Initiative Grants and Cooperative Agreements awarded under a Notice of Program Interest. These agreements are with independent institutions who work together to help the Department further define and implement approaches for credible risk assessment, management, and communication. Implement credible approaches to risk assessment, management, and communication as they are developed by the Risk Cooperative Agreement and Grant partners. 	\$ 0	\$8,876	\$4,740
<ul style="list-style-type: none"> Provide technical support to develop EM-wide guidance tools for implementing a credible framework for EM's risk analysis, risk management, risk communication, and priority setting initiatives as outlined in the Department's "Risk Principles for Using Risk Analysis" and in the National Academy of Sciences Reports "Building Consensus" and "Improving the Environment." 	0	1,488	1,500
<ul style="list-style-type: none"> Provide technical peer review and comments on scientific and technical risk materials, both internally and externally, through nationally recognized scientific and technical organizations. 	0	750	750
<ul style="list-style-type: none"> Integrate risk information into the planning process for establishing priorities among competing EM requirements, facilitating the use of risk in the budget process in determining priorities, and facilitating the use of risk in measuring performance. Integrate the process of collecting risk information into the data collection tools and into the guidance for planning and budgeting in EM. 	0	750	750

III. Performance Summary - Accomplishments

	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
<ul style="list-style-type: none"> • Work with peer review groups to ensure that risk information collected for budget formulation and for establishing priorities is consistent and credible, and to improve the quality of the process. • Provide expanded access for internal and external stakeholder useful risk-related information. 	0	200	200
	<u>0</u>	<u>60</u>	<u>60</u>
TOTAL Risk Policy Program	<u>\$ 0</u>	<u>^{1/} \$12,124</u>	<u>\$8,000</u>

SIGNIFICANT FUNDING CHANGES FROM FY 1997 TO FY 1998:

Risk Policy Program: Focus will be on continuing existing program commitments and risk issues critical to the success of the EM mission. (\$4,124)

^{1/} Funding of \$13,875,000 was appropriated for the Risk Policy Program under the Analysis, Education, and Risk Management Decision Unit in FY 1996.

DEPARTMENT OF ENERGY
FY 1998 CONGRESSIONAL BUDGET REQUEST
DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands, Narrative in whole dollars)

CLOSURE PROJECTS

PROGRAM MISSION

The Closure Projects program provides opportunities, within a fixed period of time, to clean up or decommission Department of Energy (DOE) defense nuclear facilities, or portion thereof, and to make the facilities safe by addressing urgent risks, stabilizing sites, reducing mortgage costs, applying cost-effective and innovative technology, accelerating the pace of cleanup, consolidating, treating, or removing nuclear materials in order to produce tangible results and reduce risks and long-term costs associated with facility stabilization, cleanup, and waste management.

The GOALS of the Closure Projects program are to:

Accelerate and complete projects that will result in significant long-term cost savings, mortgage reduction to the Government and the most significant reduction of worker and public risk.

The OBJECTIVES related to these goals are:

1. To ACCELERATE THE PACE OF CLEANUP, WASTE MANAGEMENT AND FACILITY STABILIZATION ACTIVITIES FOR DOE DEFENSE NUCLEAR FACILITIES - Full funding for acceleration and completion of discrete projects or sub-projects will eliminate, or significantly reduce, landlord and future surveillance and maintenance costs. EM work will be projectized and streamlined to gain maximum program efficiencies. Discrete performance measures will also be used for improving contract performance incentives and provisions within DOE contracting strategies.
2. To USE COST-EFFECTIVE AND INNOVATIVE CLEANUP, STABILIZATION AND WASTE MANAGEMENT TECHNOLOGIES - The use of cost-effective, innovative technologies and demonstration projects which have future applications at other locations and facilities will minimize the development of new technologies. Information on these projects will be shared through EM "lessons learned".
3. To CONTRIBUTE TO WORKER AND PUBLIC HEALTH AND SAFETY - One of the goals of this program is to reduce urgent risk to workers and the public. The benefits of completing these projects should enhance the support of State and local elected officials and the public for mortgage and risk reduction initiatives.

PROGRAM MISSION - CLOSURE PROJECTS (continued)

PERFORMANCE MEASURES:

Performance measures related to the Closure Projects program are currently under development. The application of innovative technology measures will be somewhat qualitative. Some quantitative performance measures include:

1. Mortgage Reduction.
2. Reduction in risk to workers and the public.
3. Acceleration of project schedule and long-term cost savings.

CLOSURE PROJECTS COMPLETION IMPACTS

- Four candidate projects have been identified during the first year (FY 1997) of the Closure Projects program. The projects cover the best combination of acceleration of site cleanup, mortgage reduction, urgent risk reduction, and application of cost-effective/innovative technology and demonstrations within the available FY 1997 funding.
- All projects will accelerate the baseline schedules and result in immediate and long-term cost savings.
- All projects have an identified work scope that can be completed with the available funding.
- All projects are supported by regulatory agreements and have State and local officials' support.
- The FY 1997 projects involve four separate DOE sites and were selected using a competitive bid process.

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 DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT

CLOSURE PROJECTS

PROGRAM FUNDING PROFILE

<u>Subprogram</u>	<u>FY 1996 Current Approp</u>	<u>FY 1997 Original Approp</u>	<u>FY 1997 Adjustments</u>	<u>FY 1997 Current Approp</u>	<u>FY 1998 Request</u>	<u>FY 1999 Request</u>
Closure Projects	\$ 0	\$ 15,000	\$ 0	\$ 15,000	\$ 15,000	\$ 13,000
TOTAL, Closure Projects	\$ 0	\$ 15,000	\$ 0	\$ 15,000	\$ 15,000	\$ 13,000

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CLOSURE PROJECTS

PROGRAM FUNDING BY SITE

<u>Field Office/Site</u>	<u>FY 1996 Current Approp</u>	<u>FY 1997 Original Approp</u>	<u>FY 1997 Adjustments</u>	<u>FY 1997 Current Approp</u>	<u>FY 1998 Request</u>
OHIO					
Battelle Columbus Laboratory	\$ 0	\$ 4,400	\$ 0	\$ 4,400	\$ 0
RICHLAND					
Hanford Site	0	4,200	0	4,200	0
ROCKY FLATS					
Rocky Flats Plant	0	4,500	0	4,500	0
SAVANNAH RIVER					
Savannah River Site	0	1,900	0	1,900	0
To be Distributed*	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>15,000</u>
TOTAL, Closure Projects	\$ 0	\$ 15,000	\$ 0	\$ 15,000	\$ 15,000

*FY 1998 funding will be distributed after sites submit candidate projects and those projects are validated for consistency with the intent of this program.

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FY 1998 CONGRESSIONAL BUDGET REQUEST
DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT

CLOSURE PROJECTS
(Dollars in Thousands)

I. Mission Supporting Goals and Objectives

The overall Environmental Management goal in support of the Closure Projects program is to identify and fund projects that will have a lasting and irreversible impact on cost and risk reduction. To accomplish this mission, Environmental Management held a complex-wide bid competition for the assignment of FY 1997 Closure Projects funding. Each Department of Energy EM site was given the opportunity to submit candidate projects for consideration. The projects were evaluated using the guidance in Conference Authorization, Section 3143, 'Projects to Accelerate Closure Activities at Defense Nuclear Facilities'. Selections were made based on the best combination of affordability in FY 1997, contribution to reducing imminent risk, possessing a significant return on the investment of FY 1997 funding, and meeting the intent of the Congressionally mandated Closure Projects screening criteria. The same procedure is envisioned for the use any future funding.

II. Funding Schedule

Program Activity	FY 1996 Appropriation	FY 1997 Appropriation	FY 1998 Request	\$ Change	% Change
Ohio	\$ 0	\$ 4,400	\$ 0	\$ -4,400	-100
Richland	0	4,200	0	-4,200	-100
Rocky Flats	0	4,500	0	-4,500	-100
Savannah River	0	1,900	0	-1,900	-100
Undistributed	0	0	15,000	15,000	100
Total, Closure Projects	\$ 0	\$ 15,000	\$ 15,000	\$ 0	0

CLOSURE PROJECTS - DEFENSE (continued)

III. Performance Summary

	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
<u>Ohio:</u>			
<ul style="list-style-type: none"> In FY 1997, funding completes decontamination efforts at the King Avenue project site and the preparation and decontamination efforts at the West Jefferson site JN-1 & 2 Hot Cell facility. Both are sub-projects of the Battelle Columbus Laboratories Decommissioning Project, known also as the Columbus Environmental Management Project. It is estimated that this funding will shorten the Columbus Environmental Management Project by at least one year. The estimated return on investment is 11.8 percent. 	\$ 0	\$ 4,400	\$ 0
Total, Ohio	<u>0</u>	<u>4,400</u>	<u>0</u>
<u>Richland:</u>			
<ul style="list-style-type: none"> In FY 1997, funding provides for removal of 1,500,000 curies of accumulated, highly-dispersable, radioactive contaminants from the B-cell in Building 324. The B-cell is located at the Hanford site and is in close proximity to the Columbia River and the City of Richland. It is estimated that this funding could save as much as \$6.0 million in future support costs associated with the safe treatment of these highly-dispersable contaminants. 	0	4,200	0
Total, Richland	<u>0</u>	<u>4,200</u>	<u>0</u>
<u>Rocky Flats:</u>			
<ul style="list-style-type: none"> In FY 1997, funding provides for the excavation and treatment of 1,400 cubic yards of low-level volatile organic concentrations using an innovative soil treatment technology. This technology has future applications for similar problems at other sites. This action will also complete Operable Unit 1 under the Rocky Flats Cleanup Agreement. This effort will save as much as \$600K in support costs through the early completion of this project. 	0	4,500	0
Total, Rocky Flats	<u>0</u>	<u>4,500</u>	<u>0</u>

CLOSURE PROJECTS - DEFENSE (continued)

III. Performance Summary (Continued)

	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
<u>Savannah River:</u>			
<ul style="list-style-type: none"> In FY 1997, funding provides for the closure of Tank 17, a High Level Waste Tank at the Savannah River Site. The effort will leave the tank in a safe state, requiring no further surveillance, and also will be the first tank closed using first-of-a-kind procedures executed by field personnel. The procedures were developed during the closure of Tank 20 using a new technology and should lead to significant cost reductions in future tank closures. Completion of Tanks 17 and 20 could lead to FY 1999 surveillance and maintenance savings of \$1.5 million. 	\$ 0	\$ 1,900	\$ 0
Total, Savannah River	<u>0</u>	<u>1,900</u>	<u>0</u>
<u>Undistributed</u>			
<ul style="list-style-type: none"> FY 1998 funding will be distributed after sites submit candidate projects and those projects are validated for consistency with the intent of this program. 	0	0	15,000
Total, FY 1998 To Be Distributed	<u>0</u>	<u>0</u>	<u>15,000</u>
Total, Closure Projects	<u><u>\$ 0</u></u>	<u><u>\$ 15,000</u></u>	<u><u>\$ 15,000</u></u>

EXPLANATION OF FUNDING CHANGES FROM FY 1997 TO FY 1998:

- The FY 1998 projects will be selected from a different set of proposals than those chosen for funding in FY 1997. These projects will be chosen based on a validation process that ensures they are consistent with the Congressional intent of this program.